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10/713,833

11/14/2003

William James Moore

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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* WILLIAM JAMES MOORE and  
JIANJUN WU

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Appeal 2009-013575  
Application 10/713,833  
Technology Center 1700

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Before JEFFREY T. SMITH, BEVERLY A. FRANKLIN, and  
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 through 16 and 24 through 51. We have jurisdiction pursuant to 35 U.S.C. § 6.

We REVERSE.

### STATEMENT OF THE CASE

The Examiner maintains the following rejections:

- 1) Claims 1-4, 9-13, 16, 40-44, 47 and 51 under 35 U.S.C. § 103(a) over Malservisi (U.S. 2004/0115532 A1, published Jun. 17, 2004) in view of Tada (U.S. 5,209,995, issued May 11, 1993);
- 2) Claims 24, 25, 30, 31, 35, 36 and 48-50 under 35 U.S.C. § 103(a) over Malservisi in view of Tada; and
- 3) Claims 5-8, 14-15, 26-29, 32-34, 37-39 and 45-46 under 35 U.S.C. § 103(a) over Malservisi in view of Tada, and further in view of Armacanqui (U.S. 2004/0033418 A1, published Feb. 14, 2004).

*Rejections (1) and (2)*

### ISSUE

Did the Examiner err in determining that the combined teachings of Malservisi and Tada would have rendered obvious the electrochemical cell having the zinc powder surface area greater than 400 cm<sup>2</sup>/g feature required by claims 1, 24, 30, 35, and 40 within the meaning of § 103? We decide this issue in the affirmative.

### PRINCIPLE OF LAW

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (*quoting In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

### ANALYSIS AND CONCLUSION

Appellants argue that the Examiner erred in maintaining the § 103 rejections over Tada and Malservisi. (App. Br. 9 and 10). Specifically, Appellants argue that:

The portion of the Tada reference cited by the Examiner does not contain an express disclosure of a numeric range of specific surface area. The cited portion only expressly teaches a numeric range of bulk specific gravity, namely a range between 2.90 g/cm<sup>3</sup> and 3.50 g/cm<sup>3</sup>. However, Bulk specific gravity is a completely different measurement than specific surface area, as evidenced by their units of measurement. Bulk specific gravity is expressed as g/cm<sup>3</sup>, whereas specific surface area is expressed in cm<sup>2</sup>/g. These measurements did not necessarily directly correlate.” (App. Br. 9).

In response, the Examiner states that

Tada et al. recognize the benefit of changing the surface area of zinc particles [to affect their reactivity] . . . . Therefore, it would have been within the skill of the ordinary artisan to change the surface are[a] of the zinc particles of Malservisi et al. such that the surface area is within the range of that claimed by applicant in order to provide sufficient reactivity. *Discovery of optimum value of result effective variable in known process is ordinarily within skill of art.*

(Ans.<sup>2</sup> 12).

We agree with Appellants that Tada does not disclose a numeric zinc powder surface area or numeric range of zinc powder surface area. While the Examiner states that it would have been within the skill of an ordinary artisan “to . . . [optimize] the surface are[a] of the zinc particles [corresponding to the claimed zinc powder] of Malservisi . . . in order to provide sufficient reactivity,” the Examiner’s statement does not sufficiently address the zinc powder surface area range required by the claims. In this regard, Tada describes the bulk specific gravity of the zinc powder. Tada does not disclose the surface area of the zinc powder particles. (Col. 2, ll. 48-52). The Examiner has not established a correlation between the bulk specific gravity of the powder particles, the surface area of the powder particles and the reactivity of the powder particles. If a person of ordinary skill in the art were to optimize the powder particles in order to provide “sufficient reactivity”, as suggested by the Examiner, it is unclear how this would affect the bulk specific gravity and the surface area of the powder particles. Consequently, the Examiner has not directed us to sufficient evidence to establish a basis for optimization of the zinc powder particle surface area to meet the limitations of independent the claims. *KSR*, 550 U.S. at 418.

Thus, it follows that the Examiner erred in determining that the combined teachings of Malservisi and Tada would have rendered obvious the electrochemical cell having the zinc powder surface area

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<sup>2</sup> We refer to the Answer filed on Apr. 14, 2009.

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greater than 400 cm<sup>2</sup>/g feature required by claims 1, 24, 30, 35, and 40 within the meaning of § 103.

*Rejection (3)*

The Examiner relies on the same factual findings and determinations discussed above and does not provide any additional findings or determinations as to how Armacanqui would have satisfied this disputed claim feature. Therefore, for the reasons stated above, we reverse the Examiner's rejection (3).

DECISION

In summary, we reverse rejections (1) through (3).

Accordingly, the Examiner's decision is reversed.

REVERSED

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